

Date: Thursday, 02/10/2008 4:18:59 PM
 User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : OH-58 FWD X-TUBE ASSEMBLY
Job Number : 42431	
Estimate Number : 13213	
P.O. Number :	Part Number : D058676101TRN
This Issue : 02/10/2008 S.O. No. :	Drawing Number : D058-676-141 U/R <i>06.00.06</i>
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : CROSSTUBES	Drawing Revision : A2
Previous Run : 37977	Material :
Written By :	Due Date : 09/10/2008 Qty: 1 Um: Each
Checked & Approved By : <i>JULIO 08.10.02</i>	
Comment : Est Rev:A 08-03-06 new issue DD verified by:ec Est rev B 08.04.02 Removed polish EC verified by: DD	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6001105	Crosstube, Material
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6001-105 Crosstube *325661**a.m 08.10.10* *①*

2.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs on both ends as per Folio FA085

2-Turn first side as per Folio FA085

3-File down transition lines smooth.

a.m 08.10.16 *①*

3.0	QC1	INSPECT ALL DIM TO DIM SHEET
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**Comment:** INSPECT ALL DIM TO DIM SHEET*a.m 08.10.16* *①*

4.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA085

2-File down transition lines smooth.

3-remove sand

a.m 08.10.16 *①*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 02/10/2008 4:18:59 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 FWD X-TUBE ASSEMBLY

Job Number: 42431

Part Number: D058676101TRN

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

A.m 08.10.16

6.0

QC8

SECOND CHECK



AWM 8-10-17



Comment: SECOND CHECK

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

A.m 08.10.20

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DP 8-10-20

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock in kanban rack

Location: *X Tube*

DP 8-10-20

10.0

QC21

FINAL INSPECTION/W/O RELEASE



08/10/21

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-10-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 42431
Description: Crosstube Assembly (OH-58 High Fwd)	Part Number: D058-676-141
Inspection Dwg: D058-676-141 Rev: A2	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.245	/		
	2.069	+0.005/-0.000	2.071	/		
	2.113	+0.005/-0.000	2.116	/		
	2.158	+0.005/-0.000	2.158	/		
	2.183	+0.005/-0.000	2.185	/		
	2.209	+0.005/-0.000	2.209	/		
	2.235	+0.005/-0.000	2.235	/		
	0.100	+/-0.010	0.100	/		
	0.144 x 30°	+/-0.010	0.144x30°	/		
	R0.063	+/-0.010	R0.063	/		
	R0.500	+/-0.010	R0.500	/		
	4.207	+/-0.001	4.207	/		
SIDE B	2.240	+0.005/-0.000	2.245	/		
	2.069	+0.005/-0.000	2.071	/		
	2.113	+0.005/-0.000	2.116	/		
	2.158	+0.005/-0.000	2.158	/		
	2.183	+0.005/-0.000	2.185	/		
	2.209	+0.005/-0.000	2.209	/		
	2.235	+0.005/-0.000	2.235	/		
	0.100	+/-0.010	0.100	/		
	0.144 x 30°	+/-0.010	0.144x30°	/		
	R0.063	+/-0.010	R0.063	/		
	R0.500	+/-0.010	R0.500	/		
	4.207	+/-0.001	4.207	/		
	103.03	+/-0.020	103.020	/		

Measured by: G. n	Audited by: JLM	Prototype Approval:	N/A
Date: 08.10.16	Date: 8-12-16	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.03.26	New Issue (P/O D058-676-101)	KJ/JLM	



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D058-676-141	REV. A SHEET 1 OF 3
DATE 00.11.17		TITLE CROSSTUBE ASS'Y (OH-58 HIGH FWD) NTS	
A	00.11.17	NEW ISSUE	

Qty	Part Number	Description
X	D058-676-141	CROSSTUBE ASSEMBLY (OH-58 HIGH FWD)
1	D6001-105	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
4	MS21920-20	CLAMP

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6001-105
FINISHED LENGTH = 103.03±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECTING OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

03.10.06
UNDER REVIEW
06.10.13 DH
Update view 0-0

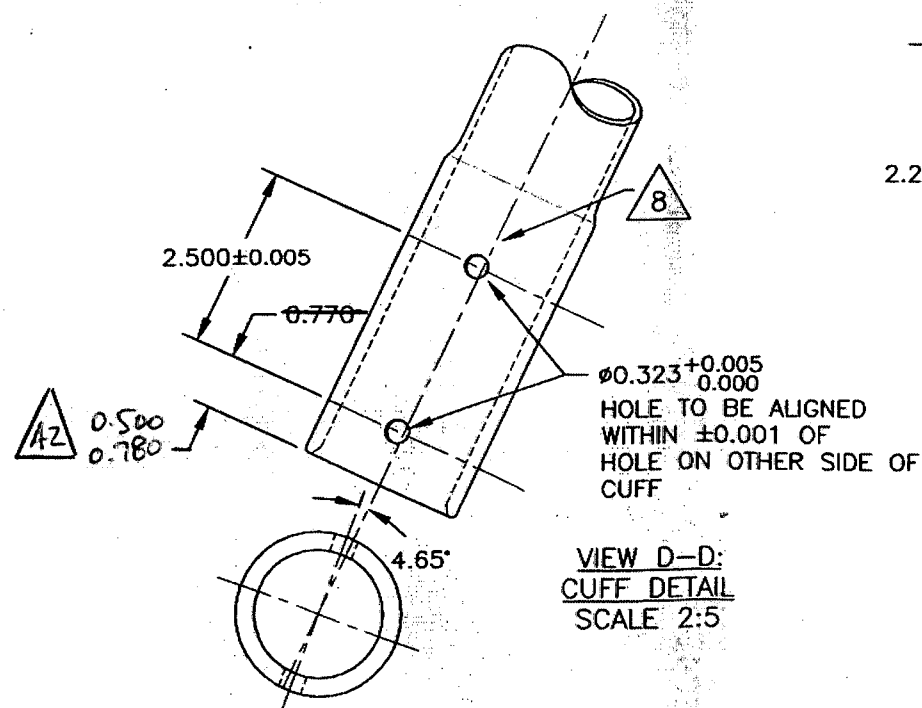
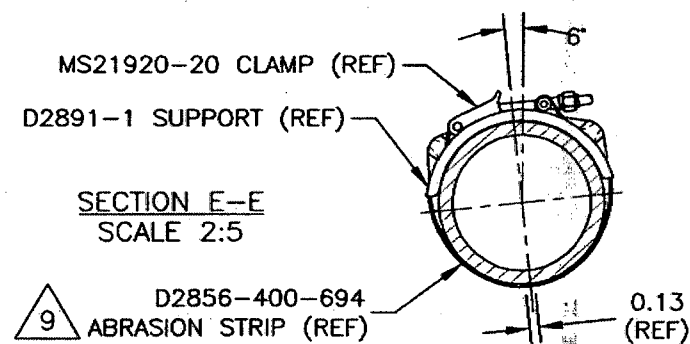
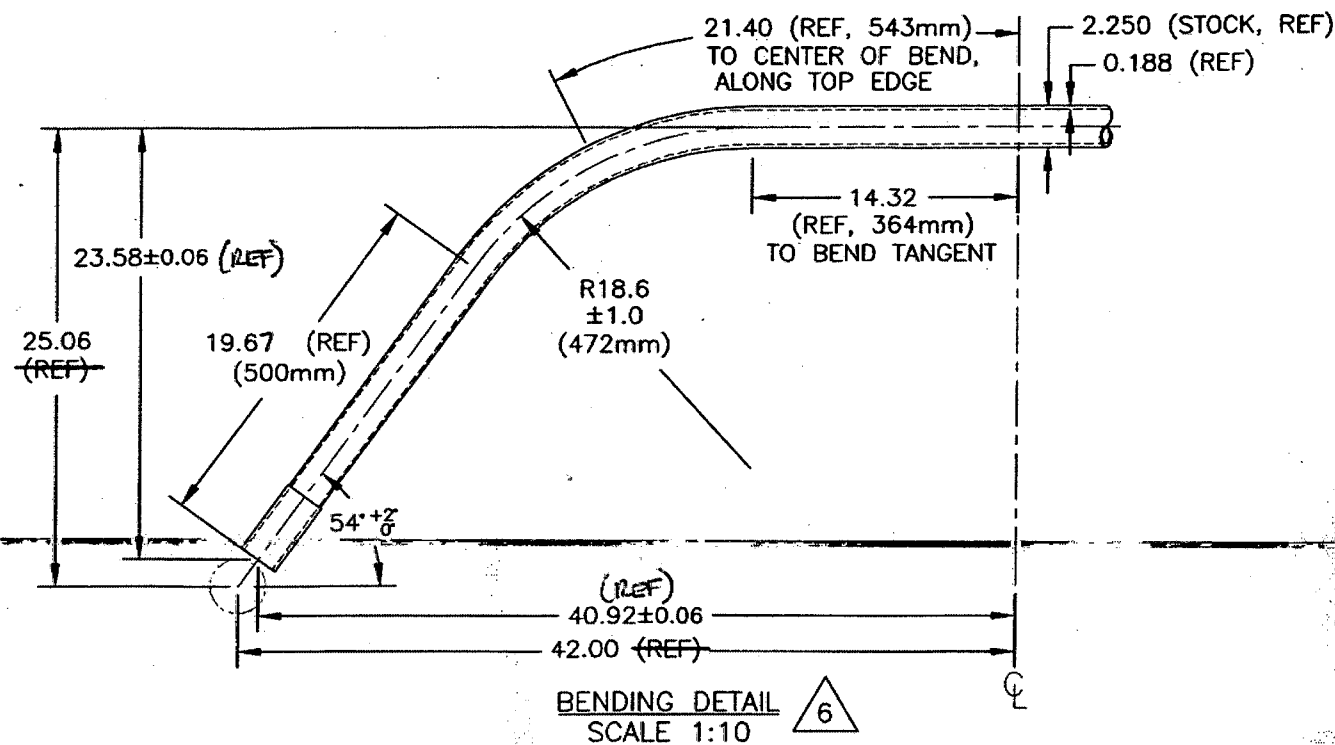
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RELEASED
00.11.24 #

A2	01.07.16	UPDATE DIM TO FIRST HOLE	<i># CP</i>
A1	01.03.07	ADD D058-676-501 P/N	<i># CP</i>

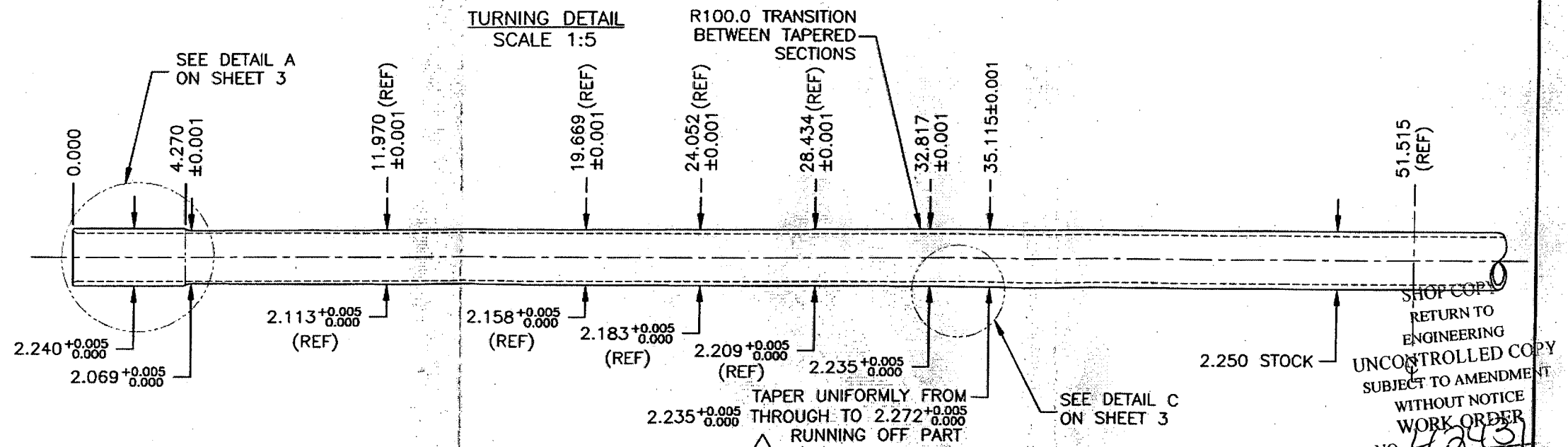
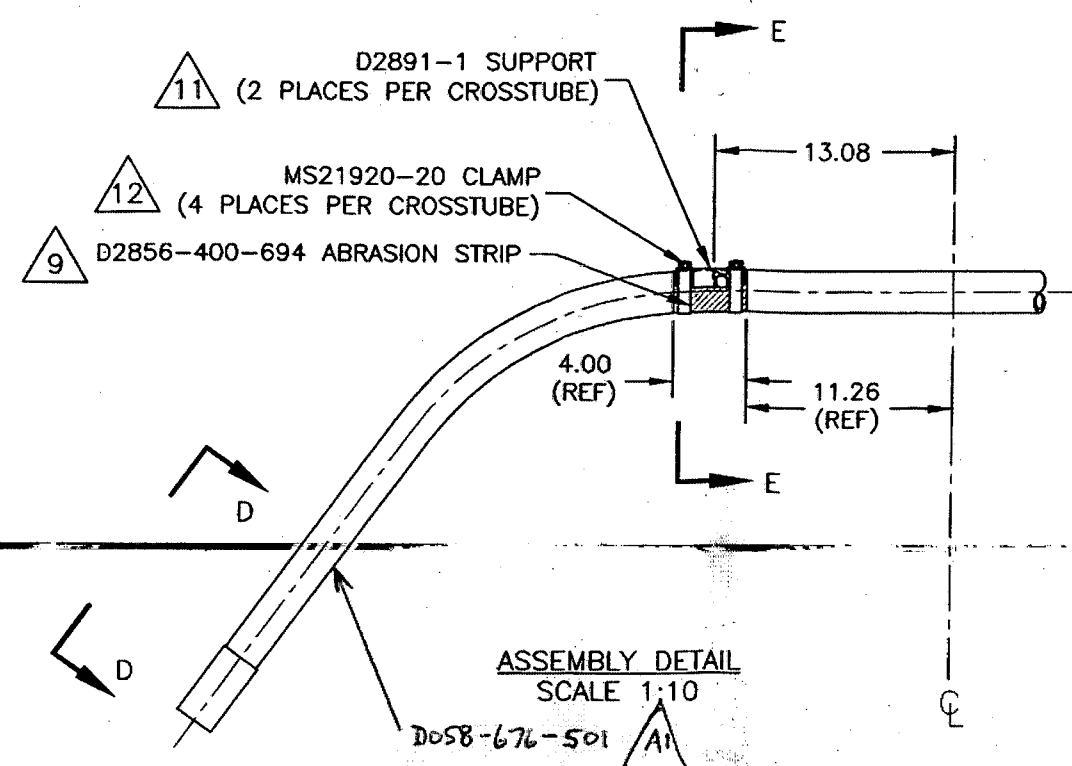
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UNDER REVIEW

06.10.18 DH
Update View D-D
06.10.06



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00.11.24

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DRAWN BY

DART

DART AEROSPACE LTD.
HARRISBURG, ONTARIO, CANADA

CHECKED

APPROVED

DRAWING NO.
D058-676-141

REV. A
SHEET 2 OF 3

DATE

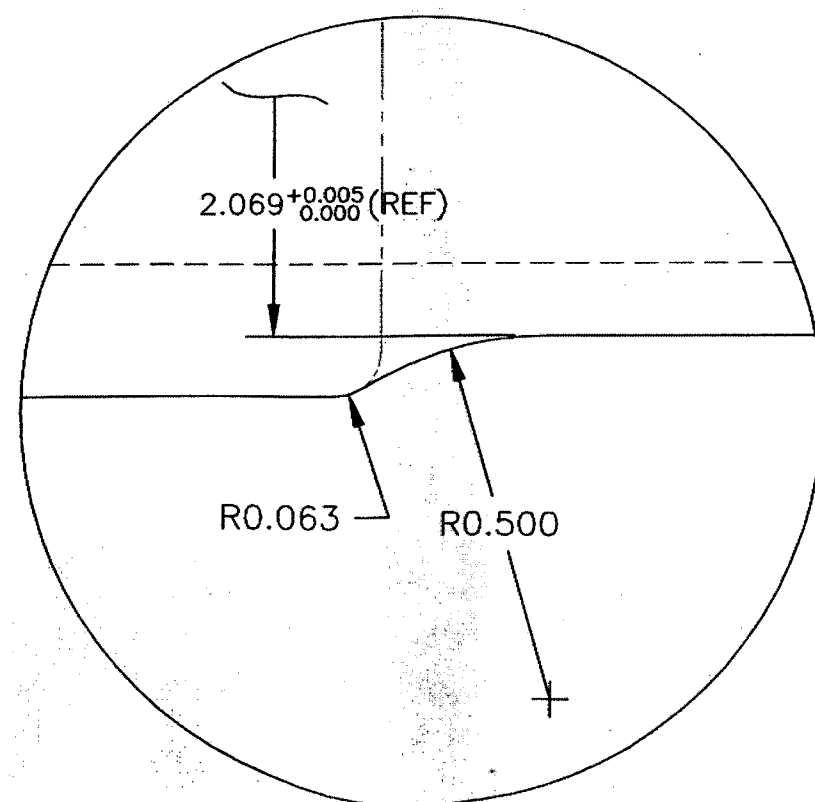
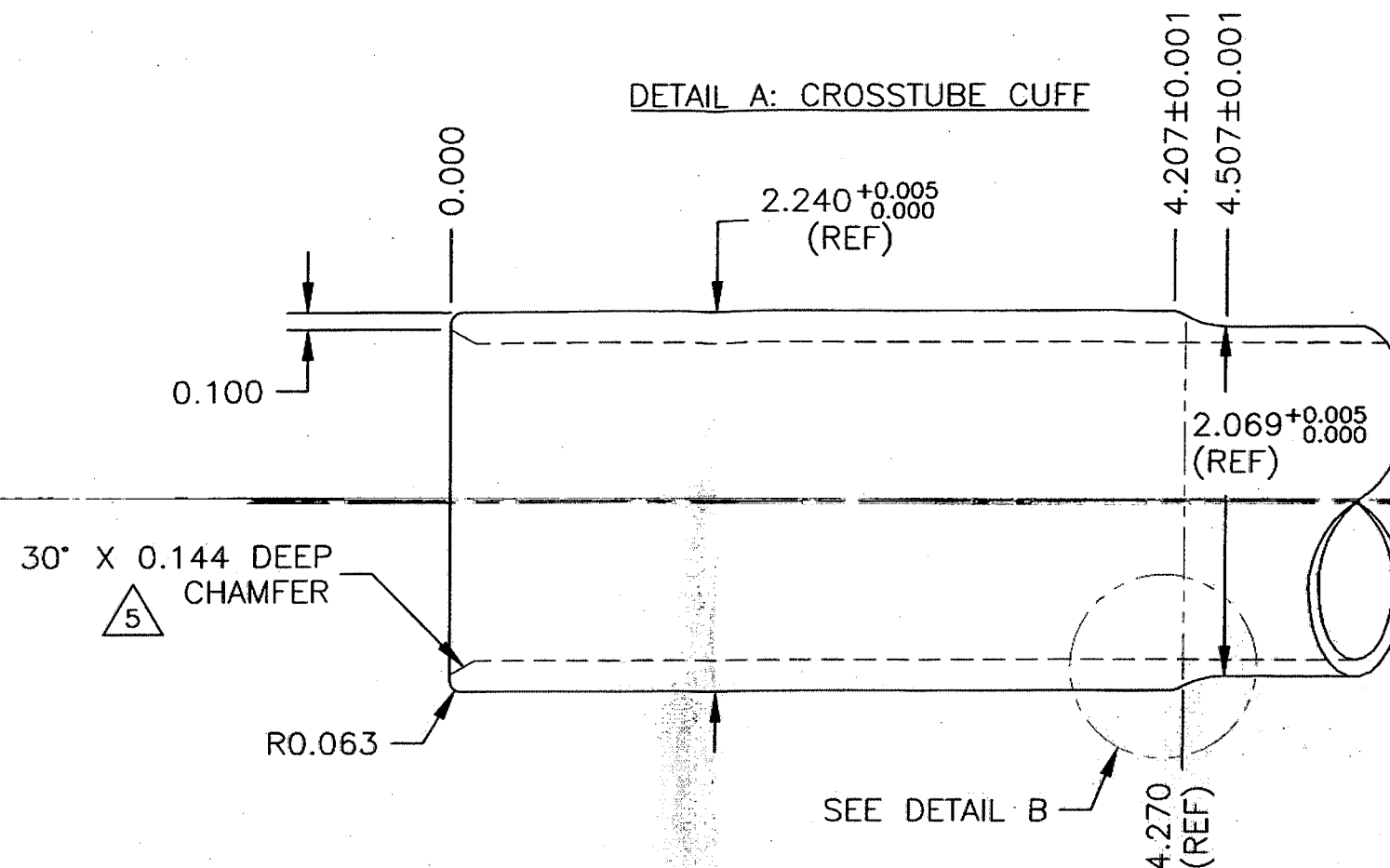
TITLE

00.11.17

CROSSTUBE ASSEMBLY (OH-SX HIGH FWD) 1:10

RELEASED
00.11.24

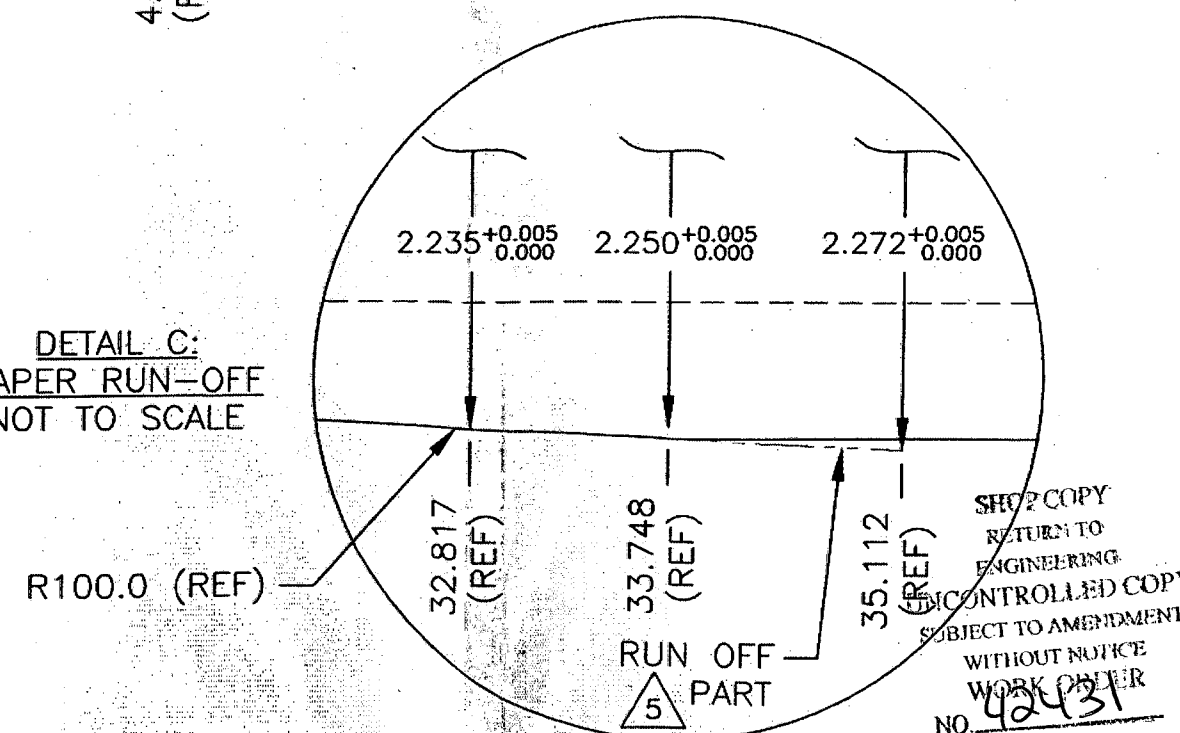
DETAIL A: CROSSTUBE CUFF



DETAIL B:
CUFF TRANSITION
SCALE 4:1

SEE DETAIL B

DETAIL C:
TAPER RUN-OFF
NOT TO SCALE



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UNDER REVIEW
06.10.13 DH
update view 0-0
At 03.10.06

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CHECKED CP	APPROVED CP	DRAWING NO. D058-676-141	REV. A
DATE 00.11.17	TITLE CROSSTUBE ASSEMBLY (CH-53 HIGH FWD)	SCALE 1:1	SHEET 3 OF 3

